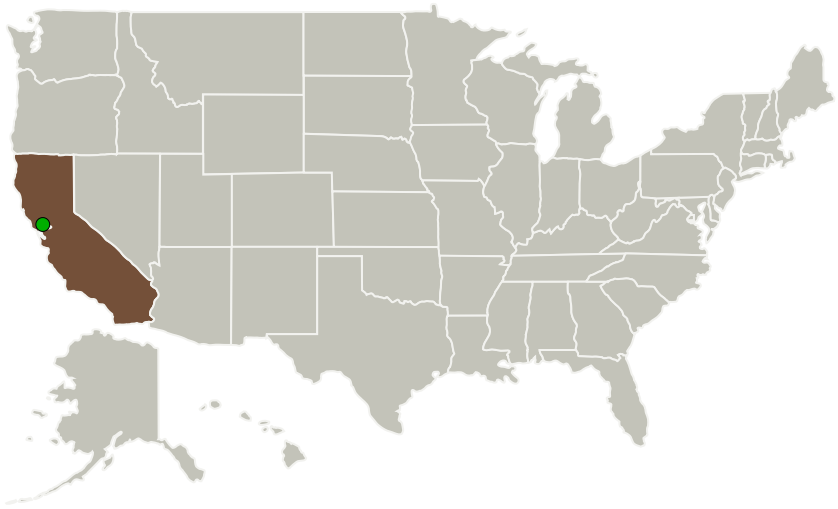
Razor UAS Test and Evaluation System, Phase I

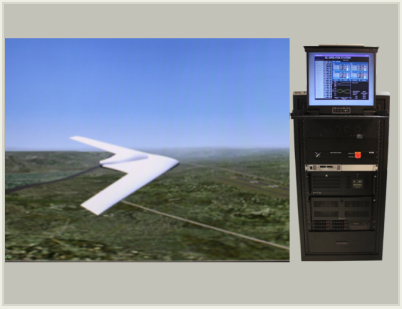
Completed Technology Project (2014 - 2014)

Project Introduction

Adsys Controls' Razor UAS Test System is a high fidelity simulation and Hardware-in-the-Loop (HIL) test system. Razor provides extensive existing capability for high fidelity real world modeling, extensive I/O capability, real-time execution, system fault simulation, full test automation, and extensive diagnostics. Razor was developed not just as a 6DOF simulator, but as a whole vehicle simulator for testing of state of the art UAS for all avionics and software. Razor has a proven track record within the UAS market where it has been used to support development and testing of various vehicles by Northrop Grumman and Lockheed Martin. Northrop Grumman used Razor for their Firebird prototype development program. Lockheed Martin used Razor for various programs including the development of their Fury UAS. Under this program, Adsys Controls will enhance the Razor UAS Test System such that it provides a platform for testing and evaluation of UAS in support of Safety Analysis and Autonomous Operations. The objective system will result in a comprehensive tool for modular UAS simulation, HIL testing, extensible scenario generation, and fault testing.

Primary U.S. Work Locations and Key Partners





Razor UAS Test and Evaluation System Project Image

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Organizations Performing Work	Role	Type	Location
Adsys Controls Inc.	Lead Organization	Industry	Irvine, California
Ames Research Center(ARC)	Supporting Organization	NASA Center	Moffett Field, California

Primary U.S. Work Locations
California

Project Transitions

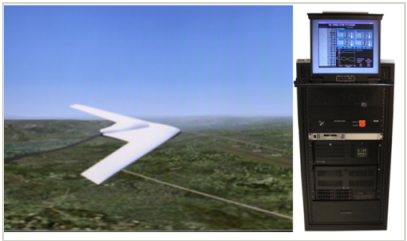
June 2014: Project Start

December 2014: Closed out

Closeout Documentation:

- Final Summary Chart*(https://techport.nasa.gov/file/137508)*

Images



Project Image
Razor UAS Test and Evaluation System Project Image
(https://techport.nasa.gov/image/126571)

Organizational Responsibility

Responsible Mission Directorate:
Space Technology Mission Directorate (STMD)

Lead Organization:
Adsys Controls Inc.

Responsible Program:
Small Business Innovation Research/Small Business Tech Transfer

Project Management

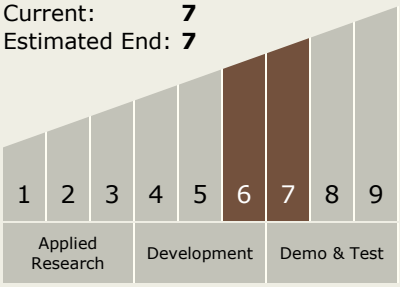
Program Director:
Jason L Kessler

Program Manager:
Carlos Torrez

Principal Investigator:
Adam J Diedrich

Technology Maturity (TRL)

Start: **6**
Current: **7**
Estimated End: **7**



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Technology Areas

Primary:

- TX11 Software, Modeling, Simulation, and Information Processing
  - TX11.3 Simulation
    - TX11.3.1 Distributed Simulation

Target Destinations

The Sun, Earth, The Moon, Mars, Others Inside the Solar System, Outside the Solar System